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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Paul A Cameron

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EXAMINER

COONEY, JOHN M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/505,148	Applicant(s) CAMERON ET AL.	
	Examiner John Cooney	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed 2-11-09 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 49 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' supporting disclosure, while being supportive of the defined range of values for retention of "initial" elongation at break, does not provide support for the range of values as currently defined by this claim. This is a new matter rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 44-56, 58-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' claims recite numerous ranges of property values associated with their products obtained, particularly, the tensile strength, elongation at break, tear strength, and impact resilience, but do not set forth the basis and conditions under which these values are determined. Accordingly, the claims are confusing as to intent because the intended metes and bounds of the claims can not be definitively determined.

Applicants' arguments with respect to the new claims are noted. However, it is maintained that the claims still have the problems indicated in the rejection set forth above. The basis for determining the values used in determining the retention over time values of specified properties set forth in the claims are not set forth in the claims. It is maintained that the intended metes and bounds of the claims can not be definitively determined.

Applicants' claims, including representatively claims 44,49, and 50, still contain many of the recited ranges of property values identified in the rejection above, as well as others added with this reply, and applicants offer no arguments and/or amendments which serve to address and/or remedy the problems identified in the rejection above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 57 is rejected under 35 U.S.C. 102(b) as being anticipated by Vinches et al.(4,602,079).

Vinches et al. discloses preparations polyesters based on dimmer fatty acids, adipic acid, and diethylene glycol and the preparation of isocyanate terminated prepolymers from these polyesters (see example 1, example 3, column 1 lines 31-39, and column 4 line 48-column 5 line 34, as well as, the entire document).

Applicants' arguments with respect to the new claim are noted. However, applicants offer no arguments identifying distinction of the invention as claimed over the above cited prior art. It is held and maintained that difference is not seen or demonstrated. Further, applicants' employment of the transitional phrase "consisting of" in claim 57 is noted. However, this claim is not seen as requiring that the isocyanate-terminated prepolymer only constitute the reaction product defined by the claims, but, rather, it only requires that the isocyanate-terminated prepolymer contain any amount of the defined reaction product. Difference through the use of transitional language, as currently employed, is not seen.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44-56, 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinches et al.(4,602,079) in view of Limerkens et al.(5,840,782).

Vinches et al. disclose preparations of polyurethane elastomers having good hydrolysis resistance based on the reaction of polyester polyols derived from the reaction of dimer fatty acids and other acids such as adipic acid with polyols such as diethylene glycol, polyisocyanate prepolymers prepared from isocyanates and the polyester polyols disclosed, and chain extenders, all employed for their reactive effects, wherein, further, elastomers prepared from isocyanate-terminated prepolymers based on the described polyester polyols are reacted with chain extenders in the presence of surfactants, catalysts, and additives to form shaped articles including shoe soles (see column 1 lines 25-31, column 3 line 23 – column 7 line 63, the examples, and the entire document). Vinches et al. provides for other carboxylic acid in amounts meeting the ratios of the claims, and provides for the inclusion of trimer contents to the degrees claimed (column 4 lines 54-55).

Vinches et al. differs from the claims in that microcellular foam formation is not particularly recited. However, Limerkens et al. recites employment of water at time of reaction in the making of related polyurethane microcellular foams used in shoe soling applications for the purpose of imparting the foaming effect (see column 3 line 65 – column 4 line 24, as well as, the entire document). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed water in the manner taught by Limerkens et al. in the preparation of the articles of Vinches et al. for the purpose of imparting cushioning and weight reducing effects to the articles realized in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Applicants' arguments have been considered. However, rejection is maintained.

The following arguments set forth previously are maintained as being relevant:

Applicants' arguments have been considered but are unpersuasive and the rejection is maintained for the reasons set forth above. It is maintained that the references are properly combined for the reasons set forth above, and it is maintained that a prima facie case of obviousness has been established.

That the primary reference discloses provisions for the presence of some degree of water does not negate or overcome the rejection as set forth above. The secondary reference is looked to for teachings of means for enacting foaming in polyurethane elastomers to form microcellular foam structures. Whether the amounts of water included/allowed for in the preparations of Vinches et al. leads to formation of microcellular foam structures to some degree is not an issue set forth by the examiner in light of the fact that Vinches et al. is silent as to microcellularity and other cell structures in the articles of their invention. However, this disclosure of Vinches et al. does not negate the combinability of Vinches et al. with a reference which goes into the microcellular foam structure arising from the use of water and other blowing agents and the controls of density associated with their use.

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Applicants' recitation of tensile strength retention values in their claims has been considered. However, based on difference in the make-up of the compositions claimed over those of Vinches et al. not being established, it is seen that these physical characteristics are qualities which would be possessed by the compositions disclosed by Vinches et al. Accordingly, such features of the claims are not seen to be differences under 35 USC 103. This recitation in the claims does not relieve applicants of their burden to demonstrate new or unexpected results attributable to the differences indicated in the rejection above which are commensurate in scope with the scope of the claims as they currently stand. At this time a sufficient showing of new or unexpected results has not been made evident.

Result Must Compare to Closest Prior Art:

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

Results Must be Unexpected:

Unexpected properties must be more significant than expected properties to rebut a prima facie case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

Claims Must be Commensurate With Showings:

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of prima facie obviousness a given claim must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Comparisons have not been related to the prior art embodiment relied upon. Applicants have not demonstrated their results to be clearly and convincingly unexpected and more significant than being secondary in nature. Applicants' showings are not commensurate in scope with the scope of combinations now claimed.

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As to the amount values of claims 35-36, these are values contained in or close in overlap with other claims of applicants' invention and are addressed in the rejection and arguments above.

Further, distinction based on the single polyester defined by the claims is not seen to be evident based on the teachings of prior art, nor is limitation to exclude other materials and/or polyesters beyond the defined polyesters of the claims reflected by the limitations of the claims.

Applicants' amendments and arguments have been considered. However, rejection is maintained including newly presented claim 43 directed towards other specified ranges of density values. It is not evident nor is it seen that applicants' claims exclude and/or distinguish over the materials provided for by the teachings of the cited prior art.

It is held and maintained that provides for realization of many good strength and other advantageous aging properties associated with their preparations. These recitations in the claims are not seen as a substitute for a factual demonstration of showings of new or unexpected results that are commensurate in scope with the scope of applicants' claims that are also shown to be more significant than results that would be expected.

It is Limerkens et al. that is looked to for addressing the deficiency of porosity in the products of Vinches et al. It is this reference that addresses the density values of applicants' claims, and, additionally, it is seen that changes in impact resilience would be an expected effect arising from foaming the preparations of Vinches et al. Again here these recitations of ranges of density and impact resilience values in the claims are not seen as a substitute for a factual demonstration of showings of new or unexpected results that are commensurate in scope with the scope of applicants' claims that are also shown to be more significant than results that would be expected.

As to the ranges of density values of applicants' claims that meet at the endpoint, or close to the endpoint as in new claim 43, of the ranges of values exemplified by Limerkens et al. (see column 4 lines 27-31), it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of the same properties. *Titanium Metals v Banner* 227 USPQ 773. **(see also MPEP 2144.05 I)** Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Applicants' recent arguments as they pertain to the new claims are noted and have been considered. However, it is maintained that Limerkens et al. is appropriately looked to for what it teaches in remedy of the deficiencies of Vinches et al., and the materials used in the making of its preparations are not so removed from the materials involved with those of the instant concern as to render the teaching non-analogous art. As to applicants' arguments of results, it is not seen that the limited showing of results are sufficient in demonstrating distinction of the claims over the prior art or demonstrating a showing of new or unexpected results over the combined teachings of the cited prior art. Comparing results after two weeks for the most preferred embodiments of applicants' claims with results of specific exemplified embodiments of the Vinches et al. teaching is insufficient in overcoming the rejection of record in that the results are not demonstrated to be commensurate in scope with the scope of the claims as they currently stand and it is not evident that the selected comparisons are fairly representative of what is taught or fairly suggested by the combined teachings of the cited prior art.

As a further note regarding the graphs provided by applicants, it is seen that, even though the lines drawn appear to demonstrate a linear relationship between loss of tensile strength over time, it can not be presumed that such is the case. It appears that the lines drawn are only linear because they are all based on two value points {a beginning and an end}. Accordingly, it is not seen that the charts provided are accurate representations or predictors of the behaviors of the identified materials over time.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/
Primary Examiner, Art Unit 1796